

**HIGH-PERFORMANCE, HIGH-DENSITY INK JET PRINTHEAD
HAVING MULTIPLE MODES OF OPERATION****ABSTRACT OF THE DISCLOSURE**

5 A monochrome ink jet printhead having a high-density array of ink drop
generators capable of multi-mode operation. The printhead of the present
invention includes the array of ink drop generators arranged in at least three
groups of nozzles with each group staggered relative to each other. This
10 staggered arrangement provides high print resolution at high speed. In
addition, the multiple modes of operation provided by the present invention
permits different print modes depending on the desired print speed, resolution
and quality. In a preferred embodiment, the present invention is capable of
printing in a one-pass 1200 dpi mode at high speed, a two-pass 600 dpi mode
15 high print quality and a one-pass 600 dpi mode at high speed. The present
invention also includes a method of high-performance printing using the ink jet
printhead of the present invention.

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